

FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY. DOCKET NO.	APPL. NO. 09/856,683
INFORMATION DISCLOSURE STATEMENT BY APPLICANT(S)	APPLICANT Vining et al.	
(Use several sheets if necessary)	FILING DATE May 23, 2001	GROUP

U.S. PATENT DOCUMENTS

Examiner Initial	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
<i>JS</i>	4 3 6 7 2 1 6	1/1983	Mutzel et al.			
	4 6 3 0 2 0 3	12/1986	Szirtes			
	4 7 1 0 8 7 6	12/1987	Cline et al.			
	4 7 1 9 5 8 5	1/1988	Cline et al.			
	4 7 2 9 0 9 8	3/1988	Cline et al.			
	4 7 3 7 9 2 1	4/1988	Goldwasser et al.			
	4 7 5 1 6 4 3	6/1988	Lorensen et al.			
	4 7 9 1 5 6 7	12/1988	Cline et al.			
	4 8 2 1 2 1 3	4/1989	Cline et al.			
	4 8 2 3 1 2 9	4/1989	Nelson			
	4 8 3 1 5 2 8	5/1989	Crawford et al.			
<i>JS</i>	4 8 7 9 6 6 8	11/1989	Cline et al.			

FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS	TRANSLATION YES NO
<i>JS</i>	9 1 1 4 3 9 7	10/1991	WIPO			
	9 4 2 4 6 4 0	10/1994	WIPO			
	0 2 3 1 9 5 0	8/1987	European Patent Office			
	0 5 1 4 5 8 7	11/1992	European Patent Office			
<i>JS</i>	2 2 6 5 7 7 5	10/1993	United Kingdom			

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

<i>JS</i>	•	T.L. Schulley, et al. "A High Resolution Nonlinearity Correcting A/D Converter Architecture," 3-6 Jun. 1993, pp. 1212-1215, 1993 IEEE International Symposium on Circuits and Systems.
<i>JS</i>	•	Vining, D.J., Padhani, A.R., Wood, S., Zerhouni, E.A., Fishman, E.K., and Kuhlman, J.E., "Virtual Bronchoscopy: A New Perspective for Viewing the Tracheobronchial Tree." Radiology. Nov. 1993, vol. 189 (P).
<i>JS</i>	•	Watt, Alan. "3D Computer Graphics." 2nd Edition, Addison-Wesley Pub. Co., 1993, pp. 320-323.
<i>JS</i>	•	Strong et al., "Applications of Three-Dimensional Display Techniques in Medical Imaging," J. Biomed. Eng. 1990, vol. 12. May, pp. 233-238.

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE

ATTY. DOCKET NO.

APPL. NO. 09/856,683

INFORMATION DISCLOSURE
STATEMENT BY APPLICANT(S)

(Use several sheets if necessary)

APPLICANT
Vining et al.FILING DATE
May 23, 2001

GROUP

U.S. PATENT DOCUMENTS

Examiner Initial	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
GD	6 0 8 3 1 6 2	7/4/00	Vining			
	4 9 5 8 9 3 2	9/1990	Kegelman et al.			
	4 9 8 4 1 5 7	1/1991	Cline et al.			
	4 9 8 5 8 3 4	1/1991	Cline et al.			
	5 0 4 7 7 7 2	9/1991	Ribner			
	5 0 5 6 0 2 0	10/1991	Feldman et al.			
	5 1 2 7 0 3 7	6/1992	Bynum			
	5 1 6 6 8 7 6	11/1992	Cline et al.			
	5 1 7 0 3 4 7	12/1992	Tuy et al.			
	5 1 8 7 6 5 8	2/1993	Cline et al.			
GD	5 2 0 4 6 2 5	4/1993	Cline et al.			

FOREIGN PATENT DOCUMENTS

DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS	TRANSLATION YES NO
9 5 2 0 2 7 0	7/1987	WIPO			
9 6 1 3 2 0 7	5/1996	WO			

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

GD	•	Oikarinen et al., "Rendering System for Tomographic Images" 0-7803-1377-1/93 IEEE.
	•	General Electric Medical Systems, "3D Navigator for CT or MR Advanced Visualization Software", 1996.
	•	General Electric Medical Systems, "K1031L/LA/N/NA Advantage™ Workstation 3.1" Product Data 1-98 Page 1-7.
GD	•	Picker International Voyager™ Product Data, "Voyager™ Visualization Tools for the Q-series Scanner", 1997.

EXAMINER

E. K. M. M. M.

DATE CONSIDERED

9/30/04

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE INFORMATION DISCLOSURE STATEMENT BY APPLICANT(S) (Use several sheets if necessary)	ATTY. DOCKET NO.	APPL. NO. 09/856,683
	APPLICANT Vining et al.	
	FILING DATE May 23, 2001	GROUP

U.S. PATENT DOCUMENTS

Examiner Initial	DOCUMENT NUMBER								DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
<i>ES</i>	5	2	2	9	9	3	5		7/1993	Yamagishi et al.			
	5	2	4	5	5	3	8		9-14-93	Lis			
	5	2	6	1	4	0	4		11-16-93	Mick et al.			
	5	2	6	5	0	1	2		11-23-93	Amans et al.			
	5	2	7	0	9	2	6		12-14-93	Tam			
	5	2	8	3	8	3	7		2-1-94	Wood			
	5	2	9	5	4	8	8		3-22-94	Lloyd et al.			
	5	2	9	9	2	8	8		3-29-94	Glassman et al.			
	5	3	4	5	4	9	0		9-6-94	Finnigan et al.			
	5	3	6	5	9	2	7		11-22-94	Roemer et al.			
	5	4	5	8	1	1	1		10-17-95	Coin			
<i>ES</i>	4	2	4	3	6	5	2		1/1981	Francis			

FOREIGN PATENT DOCUMENTS

DOCUMENT NUMBER								DATE	COUNTRY	CLASS	SUB CLASS	TRANSLATION YES NO

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

EXAMINER

Ekemulher

DATE CONSIDERED

9/30/04

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE INFORMATION DISCLOSURE STATEMENT BY APPLICANT(S) (Use several sheets if necessary)	ATTY. DOCKET NO.	APPL. NO. 09/856,683
	APPLICANT Vining et al.	
	FILING DATE May 23, 2001	GROUP

U.S. PATENT DOCUMENTS

Examiner Initial	DOCUMENT NUMBER								DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
<i>GA</i>	4	3	9	1	2	8	0		7/1983	Miller			
	4	8	7	4	3	6	2		10/1989	Wiest et al.			
	4	9	8	5	8	5	6		1/1991	Kaufman et al.			
	4	9	9	3	4	1	5		2/1991	Long			
	5	0	0	6	1	0	9		4/1991	Douglas et al.			
	5	0	2	3	0	7	2		6/1991	Cheng			
	5	0	3	8	3	0	2		8/1991	Kaufman			
	5	3	2	2	0	7	0		6/1994	Goodman et al.			
	5	6	1	1	0	2	5		3/1997	Lorensen et al.			
	5	6	2	3	5	8	6		4/1997	Hohne			
	5	6	3	0	0	3	4		5/1997	Oikawa et al.			
<i>GA</i>	5	9	7	1	7	6	7		10/1999	Kaufman et al.			

FOREIGN PATENT DOCUMENTS

DOCUMENT NUMBER								DATE	COUNTRY	CLASS	SUB CLASS	TRANSLATION YES NO

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

EXAMINER

GA

DATE CONSIDERED

9/30/04

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE INFORMATION DISCLOSURE STATEMENT BY APPLICANT(S) (Use several sheets if necessary)	ATTY. DOCKET NO.	APPL. NO. 09/856,683
	APPLICANT Vining et al.	
	FILING DATE May 23, 2001	GROUP

U.S. PATENT DOCUMENTS

Examiner Initial	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
<i>SEA</i>	5 7 8 2 7 6 2	7/1998	Vining			
<i>J</i>	5 9 2 0 3 1 9	7/1999	Vining			
<i>J</i>	5 8 9 1 0 3 0	4/1999	Johnson et al.			
<i>J</i>	5 4 1 2 7 6 3	5/1995	Knoploch			
<i>J</i>	5 9 8 6 6 6 2	11/1999	Argiro et al.			
<i>J</i>	5 9 5 7 1 3 8	9/1999	Lin et al.			
<i>J</i>	5 7 4 2 2 9 1	4/1998	Palm			

FOREIGN PATENT DOCUMENTS

DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS	TRANSLATION YES NO

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

EXAMINER

Glen H. H. H.

DATE CONSIDERED

9/30/04

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

INFORMATION DISCLOSURE STATEMENT

Complete if known

Application Number: 09/856,683

Filing Date: May 23, 2001

First Named Inventor: Vining, et al.

Group Art Unit:

Examiner Name:

Attorney Docket Number: 0101 P01789US1

JAN 3 1 2003

SHEET 1 OF 3

UNITED STATES PATENT DOCUMENTS

EXAMINER'S INITIALS	CITE NO.	PATENT NUMBER	ISSUE DATE MM-DD-YYYY	FIRST NAMED INVENTOR
SK		5,313,567	5/17/1994	Civanlar, et al.
SK		6,366,800	4/2/2002	Vining, et al.
SK		6,272,366	8/7/2001	Vining

FOREIGN PATENT DOCUMENTS

EXAMINER'S INITIALS	CITE NO.	DOCUMENT NUMBER	COUNTRY OR REGION	DATE OF PUBLICATION MM-DD-YYYY	FIRST NAMED INVENTOR OR APPLICANT
---------------------	----------	-----------------	-------------------	--------------------------------	-----------------------------------

OTHER PRIOR ART - NON-PATENT DOCUMENTS

EXAMINER'S INITIALS	CITE NO.	Include name of the author (in Capital Letters), title of the article (when appropriate), title of the item(book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published
SK		Chen, et al., "A Distributed and Interactive Three Dimensional Medical Imaging System", Comput Med Imaging Graph, Sep.-Oct. 1994; 18(5):325-37*
SK		Wiegand, et al., "The Surgical Workstation: Surgical Planning using Generic Software", Otolaryngol Head Neck Surg, Sep. 1993; 1093 (3 Pt 1): 434-40*
SK		Shapiro, et al., "Preliminary Results of a Modified Surface Redering Technique in the Display of MR Angiography Images", Magn Reson Imaging, 1994;12(3):461-8*.
SK		Rusinek, et al., "Volumetric Rendering of MR Images", Radiology Apr. 1989;17(1):269-72.*
SK		Attended Answer and Counterclaim of Defendant Voxar Limited, Filed October 10, 2002. NOT APPROPRIATE IDS stat

EXAMINER'S SIGNATURE	DATE CONSIDERED
<i>Handwritten Signature</i>	9/30/04

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP §609. Draw a line through citation if citation not in conformance and reference not considered. Include a copy of this form with next communication to applicant.

INFORMATION DISCLOSURE STATEMENT

Complete if known

Application Number: 09/856,683

Filing Date: May 23, 2001

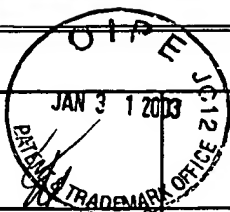
First Named Inventor: Vining, et al.

Group Art Unit:

Examiner Name:

SHEET 2 OF 3

Attorney Docket Number: 0101 P01789US1



	Shinagawa, Y., et al., "Automating View Function Generation for Walk-through Animation Using a Reeb Graph", Proceedings Computer Animation '90, at pp. 227-237 (Springer-Verlag 1990).
	Nomura, et al., "Walking through a Human Ear", Act Otolaryngol at 107:366-370 (1989).
	Mani, et al., "A Computer-Assisted Radiologic Reporting System", Radiology 108:587-596, Sept. 1973.
	Wheeler, et al., "The John Hopkins Radiology Reporting System", Radiology 119:315-319, May 1976.
	Bluemke, et al., "An Automated Radiology Reporting System That Uses HyperCard", Computers in Radiology, AJR 1993; 160:185-187 0361-803X/93/1601-0185 American Roentgen Ray Society, July 23, 1992.
	Pendergrass, et al., "An On-Line Computer Facility for Systematized Input of Radiology Reports"
	Barnhard, et al., "Computer Autocoding, Selecting and Correlating of Radiologic Diagnostic Cases"
	Bell, et al., "Experiments in Concept Modeling for Radiographic Image Reports", J Am Med Informatics Assoc. 1994;1:249-262, Jan. 1994.
	Kahn, Jr., et al., "Structured Entry of Radiology Reports Using World Wide Web Technology", RadioGraphics 1996; 16:683-691, RSNA, 1996.
	Brolin, "MEDELA: An Electronic Data-Processing System for Radiological Reporting", Radiology 103:249-255, May 1972.
	Leeming, et al., "Advances in Radiologic Reporting with Computerized Language Information Processing", Radiology 133:349-353, Nov. 1979.
	Dietrich, "Knowledge-Based Computer-Assisted Diagnosis of Chest Radiographs", Radiologic Clinics of North America - ol. XVI, No. 3, Dec. 1978.
	Jost, "Radiology Reporting", Radiologic Clinics of North America - Vol. 24, No. 1, March 1986.
	Langlotz, "Enhancing the Expressiveness of Structured Reporting Systems", Journal of Digital Imaging, Vol. 13, No. 2, Suppl. 1 (May), 2000: pp 49-53.

EXAMINER'S
SIGNATURE

E. H. H. H.

DATE
CONSIDERED

9/30/04

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP §609. Draw a line through citation if citation not in conformance and reference not considered. Include a copy of this form with next communication to applicant.

INFORMATION DISCLOSURE STATEMENT

Complete if known

Application Number: 09/856,683

Filing Date: May 23, 2001

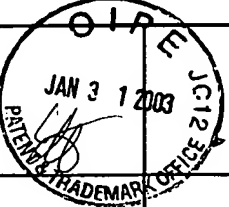


First Named Inventor: Vining, et al.

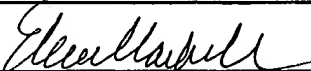
Group Art Unit:

Examiner Name:

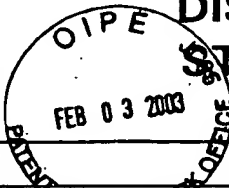
SHEET 3 OF 3

Attorney Docket Number: 0101 P01789US1

	<p>Du-Yih Tsai, et al., "Computer-based Measurement of Right and Left Ventricular Volumes in Magnetic Resonance Imaging", IMTC/94, Advanced Technologies in I & M, 1994 IEEE Hamamatsu, Japan 10-12 May 1994, New York, NY, USA IEEE, 10 May 1994, pp. 971-974, XP010121821.</p>
	<p>Lorensen, et al., "Marching Cubes: A High Resolution 3D Surface Construction Algorithm", Siam Journal on Computing, Society for Industrial and Applied Mathematics, US, Vol. 21, No. 4, 1 July 1987, pp. 163-169, XP000576999</p>
	<p>Rubin, et al., "Perspective Volume Rendering of CT and MR Images: Applications for Endoscopic Imaging", Radiology, Oak Brook, IL, US, Vol. 199, No. 2, 1 May 1996, pp. 321-330, XP002083446.</p>

<p>EXAMINER'S SIGNATURE</p>		<p>DATE CONSIDERED</p>	<p>9/30/01</p>
---------------------------------	---	----------------------------	----------------

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP §609. Draw a line through citation if citation not in conformance and reference not considered. Include a copy of this form with next communication to applicant.

INFORMATION DISCLOSURE STATEMENT 	<i>Complete if known</i>	
	Application Number: 09/856,683	RECEIVED FEB 03 2003 TECHNOLOGY CENTER R4700
	Filing Date: May 23, 2001	
	First Named Inventor: Vining, et al.	
	Group Art Unit:	
Examiner Name:	Attorney Docket Number: 0101 P01789US1	
SHEET 1 OF 1		

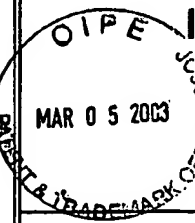
UNITED STATES PATENT DOCUMENTS				
EXAMINER'S INITIALS	CITE NO.	PATENT NUMBER	ISSUE DATE MM-DD-YYYY	FIRST NAMED INVENTOR

FOREIGN PATENT DOCUMENTS					
EXAMINER'S INITIALS	CITE NO.	DOCUMENT NUMBER	COUNTRY OR REGION	DATE OF PUBLICATION MM-DD-YYYY	FIRST NAMED INVENTOR OR APPLICANT
		6113374	Japan	1/21/1986	

OTHER PRIOR ART - NON-PATENT DOCUMENTS		
EXAMINER'S INITIALS	CITE NO.	Include name of the author (in Capital Letters), title of the article (when appropriate), title of the item(book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published
<i>FA</i>		Cavaye, et al., "A New Technique for Intraluminal Hollow Organ Imaging: Three-Dimensional Ultrasound", Journal of Laparoendoscopic Surgery, Vol. 1, No. 5, 1991, Mary Ann Liebert, Inc., Publishers.
<i>GA</i>		Kobayashi, et al., "Endoscopic Visualisation of Luminal Organs and Great Vessels with a Three-Dimensional CT Scanner: A New Trial using Volumetric CT", Nippon Acta Radiologica, Vol. 52, No. 8, pp. 1195-1197 (1992).
<i>RO</i>		Robb, et al., "A Software System for Interactive and Quantitative Visualization of Multidimensional Biomedical Images", Australasian Physical & Engineering Sciences in Medicine (1991), Vol. 14, No. 1.

EXAMINER'S SIGNATURE	<i>E. Kullback</i>	DATE CONSIDERED	9/30/04
----------------------	--------------------	-----------------	---------

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP §609. Draw a line through citation if citation not in conformance and reference not considered. Include a copy of this form with next communication to applicant.

 INFORMATION DISCLOSURE STATEMENT	<i>Complete if known</i>
	Application Number: 09/856,683
	Filing Date: May 23, 2001
	First Named Inventor: Vining, et al.
	Group Art Unit:
	Examiner Name:
SHEET 1 OF 1	Attorney Docket Number: 0101-P00789US1

UNITED STATES PATENT DOCUMENTS				
EXAMINER'S INITIALS	CITE NO.	PATENT NUMBER	ISSUE DATE MM-DD-YYYY	FIRST NAMED INVENTOR
<i>GH</i>		5,313,567	09/05/1994	Civanlar, et al.

FOREIGN PATENT DOCUMENTS					
EXAMINER'S INITIALS	CITE NO.	DOCUMENT NUMBER	COUNTRY OR REGION	DATE OF PUBLICATION MM-DD-YYYY	FIRST NAMED INVENTOR OR APPLICANT

OTHER PRIOR ART - NON-PATENT DOCUMENTS		
EXAMINER'S INITIALS	CITE NO.	Include name of the author (in Capital Letters), title of the article (when appropriate), title of the item(book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published

RECEIVED

MAR 10 2003

TECHNOLOGY CENTER R3700

EXAMINER'S SIGNATURE	<i>[Signature]</i>	DATE CONSIDERED	9/30/04
----------------------	--------------------	-----------------	---------

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP §609. Draw a line through citation if citation not in conformance and reference not considered. Include a copy of this form with next communication to applicant.

Complete if known

INFORMATION DISCLOSURE STATEMENT



Application Number: 09/856,683

Filing Date: May 23, 2001

First Named Inventor: Vining, et al.

Group Art Unit: Unknown

Examiner Name: Unknown

Attorney Docket Number: 0101-P00789US1

SHEET 1 OF 1

UNITED STATES PATENT DOCUMENTS

EXAMINER'S INITIALS	CITE NO.	PATENT NUMBER	ISSUE DATE MM-DD-YYYY	FIRST NAMED INVENTOR MAR TECHNOL

FOREIGN PATENT DOCUMENTS

EXAMINER'S INITIALS	CITE NO.	DOCUMENT NUMBER	COUNTRY OR REGION	DATE OF PUBLICATION MM-DD-YYYY	FIRST NAMED INVENTOR OR APPLICANT

OTHER PRIOR ART - NON-PATENT DOCUMENTS

EXAMINER'S INITIALS	CITE NO.	Include name of the author (in Capital Letters), title of the article (when appropriate), title of the item(book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published
EB		Sahoo, P.K., "A Survey of Thresholding Techniques", Computer, Vision, Graphics, and Image Processing (1988), No. 2, Duluth, MN, USA, pp. 233-260.

EXAMINER'S SIGNATURE	DATE CONSIDERED
	7/30/04

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP §609. Draw a line through citation if citation not in conformance and reference not considered. Include a copy of this form with next communication to applicant.

ELECTRONIC INFORMATION DISCLOSURE STATEMENT

Electronic Version v18
Stylesheet Version v18.0



Title of
Invention

Virtual Endoscopy with Improved Image Segmentation and
Lesion Detection.

Application Number: 09/856683
Confirmation Number: 3100
First Named Applicant: David Vining
Attorney Docket Number: 0101P01789US1
Search string: (5807256).pn.



US Patent Documents

Note: Applicant is not required to submit a paper copy of cited US Patent Documents

init	Cite.No.	Patent No.	Date	Patentee	Kind	Class	Subclass
	1	5807256	1998-09-15	Taguchi, et al.			

Signature

Examiner Name	Date
	9/30/04

RECEIVED
APR - 1 2004
TECHNOLOGY CENTER 3700